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ABSTRACT

An examination of the effectiveness of programs for limited-English proficient (LEP) students in the Austin Independent School District (AISD) derived information on LEP student counts, programs and services for LEP students, program costs, and LEP student achievement. Information indicated that the count of LEP students was growing (3,042 in 1985-86), especially in kindergarten and first grade. Services provided to LEP students include transitional bilingual education and English as a second language (ESL). Bilingual/ESL certified teachers provided services to both Hispanic and Vietnamese students. Although the supply of certified teachers was increasing, staffing did not always match needs. Bilingual aides were assigned to assist with program implementation, but were not cost effective when compared with increases in student achievement. Since all LEP students could not be tested in English, English achievement could not be measured accurately; however, it appeared the AISD's bilingual/ESL program was helping LEP students' proficiency. Spanish-speaking LEP students remained below the national average, but were improving. Vietnamese students achieved above the national average in mathematics and language and were closing the gap in reading. Instructional remedies must be sought, however, to prevent gains of less than 1 grade equivalent per year for Spanish LEP students in grades 2 and 4. (JMM)

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# A Look at Programs for Limited English Speakers

RC016326

Austin Independent School District 1985-86

85.57

# A LOOK AT PROGRAMS FOR LIMITED ENGLISH SPEAKERS

## EXECUTIVE SUMMARY

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**OTHER CONTACT PERSONS:** David Doss, Glynn Ligon

## MAJOR POSITIVE FINDINGS

1. The gap between the national percentile norms and the average scores of Spanish LEP students is slowly closing for those tested. The percentage of students originally classified as Spanish dominant who score above the 40th percentile has increased across the years.

2. Between spring, 1985 and 1986, LEP students participating in the 1985-86 bilingual and Title VII programs at Murchison showed average gains exceeding one year in reading and language (1.22 to 1.82 grade equivalents) and in mathematics computation at grade 7 (1.65 GE).

3. Vietnamese students able to be tested in 1985-86 and 1984-85 already achieved above the national norm in mathematics computation at grades 1 through 8 and 11 and in language at grades 1-5.

## MAJOR FINDINGS REQUIRING ACTION

1. Bilingual aides do not appear to have a positive impact on the progress of students dominant in another language or balanced in English and another language. Students not served by bilingual aides showed about the same or significantly greater progress in language and reading than those served. Approximately $310,000 was allocated for bilingual aides in 1985-86.

2. The number of LEP students in AISD increased 13% between fall, 1984 and fall, 1985 at grades K-12. The number of bilingually endorsed teachers increased just enough to maintain the ratio of endorsed teachers to LEP students. Efforts to recruit bilingually endorsed teachers at all levels must continue. Additional bilingual teachers will also be needed at the pre-K level next year.

3. For the third year in a row, Spanish LEP students at grades 2 and 4 appeared to lose ground with respect to the national norm in reading, language, and mathematics.

4. Transportation represents an additional cost for four bilingual/ESL programs which pull students from across the city. The costs and benefits of each should be reviewed.

5. AISD's LEP students at grades 3, 5, 7, and 9 show TEAMS mastery percentages consistently below the State average for LEP students.

The focus of this report is the effectiveness of programs for limited-English-proficient (LEP) students. Information is provided on the following topics:

- LEP student counts (pages 2-3),
- Programs and services for LEP students (pages 4-8),
- Program costs (pages 8-9),
- LEP student achievement (pages 10-20).

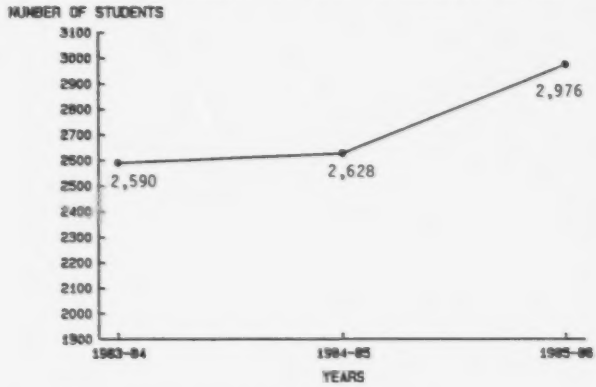
For detailed information, see the Bilingual/ESL Programs: 1985-86 Final Technical Report (ORE Pub. No. 85.56). The Chapter 1 and Chapter 1 Migrant final and technical reports (ORE Pub. Nos. 85.03 and 85.05) also include information on LEP student time use and the impact of schoolwide projects, Chapter 1 programs, and pre-K on LEP students.

## HOW MANY LEP STUDENTS DOES AISD HAVE?

"Official" counts are done for TEA each October. Counts are run again in spring to take exiting students and attrition into account (see page 4). The following trends in LEP counts are interesting to note:

- Official October counts for the last three years show that AISD's count of LEP students is increasing. The increase between 1983 and 1984 was 2%; the increase between 1984 and 1985 was 13%.

FALL COUNT OF LEP STUDENTS K-12




- As in years past, the number of LEP students is largest at grades kindergarten and one and declines through grade 12.

- The District's objective is to help its LEP students attain English proficiency as quickly as possible. On the average, it took those who exited this year 2.3 years to meet the criteria. This compares to 2.7 years in 1984-85.

- There were 661 students in 1985-86 whose parents requested that their children not be included in any LEP-related instructional program. This number reflects an increase compared to 586 students in 1984-85. However, the percentage of the eligible population this represents remained stable at 18%.

- In 1985-86, about 54% of the LEP students in AISD were dominant in a language other than English, with 24% balanced in two languages, and 21% English-dominant.

## LEP Population Characteristics

The LANG Masterfile is a District computer file maintained to provide up-to-date information on all students who have a "home language other than English" (LOTE). Of particular interest are those LOTE students who are of limited English proficiency (LEP). Federal, state, and local guidelines require that these students be provided special language instruction until such time as their language-related achievement and English proficiency improves to criterion levels. Identification and update information is recorded on the Masterfile as a basis for monitoring and meeting the District's responsibilities for LEP pupils.

SPRING, 1985-86 SUMMARY STATISTICS REGARDING LEP STUDENTS

| GRADE | PK | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Regular LEP | 140 | 467 | 471 | 293 | 264 | 222 | 219 | 201 | 143 | 122 | 96 | 59 | 32 | 24 | 2,753 |
| # Special Ed. | 0 | 5 | 12 | 28 | 28 | 36 | 33 | 38 | 35 | 29 | 22 | 14 | 6 | 3 | 289 |
| **Total LEP** | **140** | **472** | **483** | **321** | **292** | **258** | **252** | **239** | **178** | **151** | **118** | **73** | **38** | **27** | **3,042** |
| # of Students with Parent Denial for Bil./ESL Program | 1 | 25 | 22 | 30 | 20 | 45 | 53 | 60 | 51 | 60 | 89 | 80 | 63 | 62 | 661 |
| Number of LEP Exits in 1986 | 0 | 21 | 49 | 25 | 24 | 30 | 20 | 13 | 11 | 17 | 1 | 2 | 3 | 1 | 217 |
| Average Number of Years to Exit | 0 | .5 | 1.5 | 1.9 | 2.2 | 2.8 | 3.6 | 3.4 | 3.1 | 3.4 | 6.5 | 1.3 | 2.6 | .5 | 2.3 |

| # Students Eligible for: | PK | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bil. Ed. Total** | **139** | **430** | **447** | **274** | **240** | **209** | **203** | **188** | **124** | **100** | **0** | **0** | **0** | **0** | **2,354** |
| Hispanic | 139 | 408 | 428 | 259 | 229 | 196 | 183 | 173 | 124 | 100 | 0 | 0 | 0 | 0 | 2,239 |
| Vietnamese | 0 | 22 | 19 | 15 | 11 | 13 | 20 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 115 |
| **English as a second language Total** | **1** | **38** | **23** | **19** | **24** | **13** | **16** | **13** | **19** | **22** | **96** | **59** | **32** | **24** | **399** |
| Hispanic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 40 | 21 | 14 | 145 |
| Vietnamese | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 9 | 10 | 11 | 5 | 1 | 46 |
| Cambodian | 0 | 1 | 1 | 1 | 4 | 0 | 2 | 2 | 4 | 1 | 2 | 2 | 2 | 0 | 22 |
| Laotian | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 2 | 1 | 2 | 5 | 1 | 0 | 2 | 19 |
| Chinese | 1 | 7 | 2 | 1 | 3 | 2 | 2 | 2 | 1 | 7 | 3 | 2 | 1 | 4 | 38 |
| All Others | 0 | 30 | 19 | 15 | 15 | 10 | 12 | 7 | 3 | 3 | 6 | 3 | 3 | 3 | 129 |

| LEP Status by Dominance | GRADE PK | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hispanic | | | | | | | | | | | | | | | |
| Span. Dominant | 92 | 299 | 275 | 162 | 120 | 80 | 77 | 62 | 51 | 66 | 39 | 29 | 13 | 7 | 1,372 |
| Balanced Bil. | 11 | 55 | 77 | 64 | 75 | 83 | 70 | 79 | 64 | 32 | 32 | 12 | 7 | 5 | 666 |
| Eng. Dominant | 36 | 58 | 87 | 58 | 61 | 64 | 63 | 70 | 42 | 27 | 18 | 11 | 5 | 2 | 602 |
| Vietnamese | | | | | | | | | | | | | | | |
| Viet. Dominant | 0 | 17 | 18 | 16 | 7 | 12 | 18 | 14 | 8 | 8 | 10 | 9 | 5 | 1 | 143 |
| Balanced Bil. | 0 | 12 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 17 |
| Eng. Dominant | 0 | 1 | 1 | 0 | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |

## WHAT SERVICES ARE PROVIDED TO LEP STUDENTS?

All students who indicate a language other than English on their Home Language Survey (HLS) are tested in order to determine their English proficiency. LEP students are identified based on scores on tests of language proficiency and achievement test scores. The language proficiency tests used are the Primary Acquisition of Language (PAL) at grades pre-K through 6 and the Language Assessment Battery (LAB) at grades 7-12.

Dissatisfaction with the PAL has been voiced for many years. In 1985-86, a committee reviewed several tests and recommended that the IDEA Oral Language Proficiency Test (IDEA) replace the PAL at grades pre-K through 6. This change was approved and is now being implemented for 1986-87. Students with limited English proficiency are then offered Transitional Bilingual Education (TBE) and/or English as a second language (ESL) services depending on their home language and grade level.

## TRANSITIONAL BILINGUAL EDUCATION (TBE)

TBE is required by State law when the District enrolls 20 or more elementary LEP children of a given language at a specific elementary grade level. AISD is required to provide TBE to Hispanic and Vietnamese LEP students at grades K-6. AISD also provides bilingual service to pre-K and grades 7 and 8 LEP Hispanic students. Pre-K service will be required by State law starting in 1986-87.

Most Hispanic elementary students receive bilingual services at their home campuses. If a bilingual teacher is not available, transfers and transportation to other schools are offered. Vietnamese bilingual services are provided at Wooten and Walnut Creek (K-6). For grades 7-8, bilingual education is offered at Murchison Junior High for Hispanic LEP students who are Spanish monolingual or Spanish dominant.

The TBE program provides dual language instruction through teachers endorsed by the State in Bilingual Education or English as a second language methodology. Students are provided with:

- Basic concepts starting the student in the school environment (in the student's primary language).
- Basic skills of comprehension, reading, and writing (in the student's primary language and in the English language).
- Subject matter and concepts (in the student's primary language and in the English language).
- Experiences to instill student confidence, self-assurance, and a positive identity with his or her cultural heritage.

The amount of time spent in primary language or English language instruction for each LEP student is determined at the individual campus level based on justification documented by Language Proficiency Assessment Committee (LPAC).

When surveyed, most elementary administrators (70%) and bilingual-endorsed teachers (69%) indicated that the TBE program has been effective in helping students learn English.

## ENGLISH AS A SECOND LANGUAGE (ESL)

ESL is one component of the bilingual program. However, it is also a separate program offered to LEP students with home languages other than those eligible for TBE. In addition, ESL is offered to students eligible for TBE if their parents refuse such service (to avoid a transfer or for other reasons).

ESL is a sequential and intensive English language instruction program in the skills of listening, speaking, and writing. This program also includes a cultural component which addresses the history and culture of the primary language of the LEP student as well as the history and culture of the United States. The program is taught for a minimum of 45 minutes throughout the day, 20 minutes of direct teaching and 25 minutes of lesson adaptation by teachers endorsed in ESL or bilingual education. Secondary LEP students generally received 50-55 minutes of ESL instruction (one class period). When surveyed, most administrators (73%) and ESL-endorsed teachers (69%) agreed that the ESL program is being adequately implemented.

An enhanced ESL program called Sheltered Bilingual was initiated in 1985-86 at Travis for Spanish monolingual/dominant students (maximum enrollment of about 50). This provided an extra class period of ESL support.

If parents at any grade level refuse bilingual and ESL services, the regular all-English curriculum is provided.

## TITLE VII

A Title VII Program was initiated at Murchison Junior High plus Travis, Anderson, and Johnston High Schools in 1985-86. The Title VII Program provided ESL endorsement training for teachers, workshops, curriculum development, and tutors for LEP A and B students. A total of 233 students were eligible to be served.

## BILINGUAL/ESL CERTIFIED TEACHERS

Teachers who provide TBE must have bilingual endorsement. ESL must also be provided by ESL or bilingual-endorsed teachers. The supply of such teachers is therefore critical. These teachers generally have LEP and non-LEP students in their classrooms. Figure 1 provides a breakdown of the number of teachers endorsed in each area in 1985-86.

| ENDORSEMENT | ELEMENTARY | SECONDARY | TOTAL |
|---|---|---|---|
| Bilingual | 335 | 7 | 342 |
| Regular ESL | 56 | 12 | 68 |
| Austin ESL | 494 | 73 | 567 |
| Total | 885 | 92 | 977 |

Figure 1. NUMBER OF AISD TEACHERS WITH BILINGUAL AND ESL ENDORSEMENT, 1985-86. Regular ESL represents teachers who have completed four courses in ESL techniques. Austin ESL represents teachers granted certification in Austin ISD only because they taught LEP students prior to 1980-81.

The supply of bilingual-endorsed teachers increased from 284 in 1984-85 to 342 in 1985-86 (a 20% increase). (The number has increased each year since 1982.) The number of elementary students eligible for TBE also increased to 2,239 students for Spanish speakers and 116 for Vietnamese speakers.

On the average, there were 6.7 Spanish LEP students per bilingual-endorsed Spanish teacher (332) at grades pre-K through 6. This number appears adequate until the distribution by school and grade is examined. The number of LEP students served per teacher varied. Staffing did not always match needs. The other three bilingual teachers were in the Vietnamese bilingual program available at Wooten and Walnut Creek. Enrollment was 75 students in 1985-86.

Of the 224 Hispanic LEP students at grades 7 and 8 this year, 103 were enrolled in the Murchison bilingual program at year's end. Five bilingually-endorsed teachers served these students; students were also mainstreamed as possible into regular classes taught in English.

The number of Austin ESL certified teachers (567) far exceeded the number of regular ESL teachers (68) in 1985-86. Regular ESL endorsement means that teachers have completed four courses in methods of teaching English as a Second language. Austin-only ESL endorsement teachers had one or more LEP students in their classes prior to 1980-81. The adequacy of the Austin ESL teachers' backgrounds in meeting the needs of LEP students varies considerably.

At the elementary level, 187 students were to receive ESL (including 41 Vietnamese) plus a number of Hispanics refusing bilingual service. This averages out to 3.3 ESL students per regular ESL teacher (56). At the secondary level, 404 students were to be served through ESL (including 121 Hispanic Junior High students not at Murchison). If served only by regular ESL teachers, each would need to have served 33.7 students per day (in one-hour classes). Again, regular ESL teachers were not distributed in such a way to permit this assignment at all schools.

## BILINGUAL AIDES

In 1985-86, 29 bilingual instructional aides were assigned to assist with program implementation. Nearly all (27) were assigned to elementary schools with high concentrations of LEP students. These aides reinforced the work of bilingual teachers by:

- 8:00 - 2:30 p.m.: Working with individuals and small groups on skills or activities introduced by the teacher,
- 2:30 - 3:45 p.m.: Preparing media and bulletin boards following teacher specifications, assisting in clerical tasks, attending inservice.

An analysis of the aides' effectiveness in promoting academic achievement can be found in the achievement section of this report.

At the secondary level, one aide is assigned to assist with the Murchison Junior High bilingual program. The other works with Vietnamese students at various campuses.

## BILINGUAL STIPENDS

In 1985-86, a salary supplement was instituted for bilingual teachers as a recruiting tool. Teachers who met criteria all year were awarded $1,500; others were prorated according to length of eligibility. Supplements were awarded to pre-K through grade 12 teachers who:

1. Held a valid teaching certificate with a bilingual endorsement or a bilingual special permit and,
2. Engaged for at least three hours during the day in basic or supplementary dual language instruction through any or all of these components of Transitional Bilingual Education: language arts, mathematics, science, and/or social studies.
3. Worked with LEP students dominant in another language or balanced in English and another language (LEP categories A, B, and C).

As of June, 1986:

- 271 of 342 bilingually endorsed teachers (79%) had received stipends (266 elementary, 4 junior high, 1 high school).
- 2,799 LEP A, B, and C students were served by these teachers. The median number served was six.
- 78% of the stipended teachers served 10 or fewer LEP A, B, and C students (plus non-LEP students).

## WHAT IS THE COST OF BILINGUAL/ESL SERVICES?

An attempt was made to determine costs incurred for bilingual and ESL services above and beyond those for the regular AISD program. The basic cost components that were analyzed included:

- Bilingual aides,
- Bilingual stipends,
- Vietnamese centers at Wooten and Walnut Creek,
- Pillow and Mathews Hispanic curriculum transfer centers,
- Travis Sheltered Bilingual program,
- LEP pre-K, pre-first summer school,
- Administration
  --Personnel, travel, telephone, consultants
  --Supplies, materials, stipends, reproduction (much used at schools),
- Evaluation.

Allocated costs were generally used because they reflect the amount that had to be set aside for each component. In most cases, funds were used almost completely. In the case of stipends, allocations and expenditures are listed. Expenditures had to be used for transportation -- no complete allocations were available.

Most teachers' basic salaries were not included because LEP students are simply assigned to teachers endorsed in bilingual or ESL and they provide all of the students' basic instruction. However, some teachers were included for specific reasons:

- Three additional Vietnamese teachers assigned to Walnut Creek and Wooten because they work as resource teachers (in the absence of sufficient Vietnamese/English bilingual classroom teachers).

- Four bilingual teachers at Murchison (ESL is the only required program at junior high);

- The additional .5 of a teacher assigned to the Sheltered Bilingual program at Travis (not a required program);

- Summer school teachers;

- Four additional bilingual teachers assigned to Pillow so that they could accept transfer students (bilingual teachers were supplied **in place of** non-endorsed teachers at Mathews).

Overall, the allocated costs for bilingual programs in 1985-86 were $2,187,615 ($704 per LEP student). The costs and benefits must really be analyzed by component. Bilingual aides do not appear to positively impact student achievement, and therefore do not seem cost effective (see achievement results). A cut seems appropriate. Summer school for pre-K and pre-first LEP students is required by the State. The highest costs per student were found for the four programs which transfer LEP students citywide for curriculum transfers--the Pillow and Mathews Spanish Transfer Centers, the Vietnamese Centers at Wooten and Walnut Creek, the Murchison program, and the Travis program. The costs of these programs (especially transportation)

must be weighed against the instructional benefits and alternatives.

- The Vietnamese center is the only one of the four centers that is required. Transfers seem to be the most cost effective and practical way to provide bilingual instruction to these students given that there are only three Vietnamese bilingual teachers in AISD. It would be impossible to serve all Vietnamese students on their home campuses.

- The Murchison bilingual program, while exceeding State requirements, has proven successful for most students in terms of achievement. The same type of bilingual service would not be possible on all home campuses. Of the four programs, Murchison has the lowest cost per student contact hour because a fairly large number are served (all day contact was assumed).

- The Travis program is not required. The cost per student contact hour is the highest of the four because only one additional hour of ESL is provided. Achievement results are inconclusive about whether the Travis program is worth the additional expense.

- The Pillow and Mathews centers may have outlived their usefulness to aid AISD compliance; it may be more cost efficient to replace non-endorsed teachers with bilingual teachers at the campuses in greatest need (through transfers or new hires) to meet State instructional requirements.

| COMPONENT | OCT., 1985 STUDENTS SERVED | BUDGET ALLOCATION | COST PER STUDENT | S.C.H. | S.C.H. COST PER YEAR |
|---|---|---|---|---|---|
| Vietnamese Centers | 69 | T=$ 60,500<br>B=$ 50,715<br>Total=$111,215 | $ 876.81<br>$ 735.00<br>Total=$1,611.81 | 1-2 hrs. each<br>18,113 hrs. total<br>(at 1.5 hours) | $1,075 |
| Hispanic Curriculum Transfer Centers | 39 | T=$ 93,405<br>B=$ 56,700<br>Total=$150,105 | $2,395.01<br>$1,453.85<br>Total=$3,848.86 | 6 hrs./day<br>40,950 hrs. | $ 642 |
| Murchison | 103 | T=$ 91,799<br>B=$112,455<br>Total=$204,254 | $ 891.25<br>$1,091.80<br>Total=$1,983.05 | 1-6 hrs/day,<br>108,150 hrs. total<br>(at 6 hrs./student) | $ 331 |
| Travis<br>*72 total, 50 LEP A & B | 50 Fall* | T=$ 19,493<br>B=$ 26,649<br>Total=$ 46,142 | $ 389.86<br>$ 532.98<br>Total=$ 922.84 | 1 extra<br>(1 required,<br>2 provided)<br>8,750 total | $ 923 |
| Summer School 1985 (pre-K, pre-1) | 300 | $174,797 | $ 582.66 | 4 hrs./day 8 wks.<br>48,000 hrs. | $ 638 |
| Bilingual Aides (28; 29th is at Murchison) | 1,596 | E=$310,786<br>S=$ 19,891<br>(Vietnamese) | E=$ 215.44<br>S=$ 331.52 | Work with students<br>6 hrs. per day,<br>varies by student | |
| Bilingual Stipends | 2,799 | $600,000 Allocated<br>$391,926 Expended | $ 214.36<br>$ 140.02 | 3-6 hrs. per day<br>per student | |
| Administration (Elementary & Secondary) | 5,224* | Personnel etc.=<br>$397,248<br>Supplies, etc.=<br>$109,499<br>Total=$506,747 | $ 76.04<br>$ 20.96<br>Total=$ 97.00 | | |
| Evaluation | 8,400 LOTE | $ 63,678 | $ 7.58 | | |
| TOTAL | 3,106 LEP | $2,187,615 | $ 704.00 | | |

KEY

E=Elementary T=Teachers
S=Secondary B=Busses (Transportation)
SCH=Student Contact Hours Per Year

COSTS SPECIFICALLY FOR BILINGUAL/ESL SERVICES, 1985-86. *Six staff at 3,106 LEP and four at 8,400 LOTE students.

## HOW IS ACHIEVEMENT PROGRESSING FOR LEP STUDENTS?

### ONE-YEAR FOLLOWUP

The progress of LEP students in grades 1-12 tested in AISD with the ITBS or TAP in spring, 1985 and spring, 1986 was monitored (see Figure 2). It is important to realize that LEP students with insufficient skills to take the ITBS are not reflected. Separate analyses with grade equivalent (GE) scores were done for the total group, Spanish only, Vietnamese only, and "Other" LEP students in three test areas: Reading Total, Language Total, and Mathematics Computation (Mathematics Total at grades 9-12). Mathematics Computation was used at the elementary level because it is the least language dependent of the ITBS tests. Scores on this test are therefore expected to more closely reflect LEP students' real ability. At the high school level, only one score is available which reflects concepts and problem solving as well as computational ability.

#### Spanish Speakers

In almost all cases, average scores for Spanish speakers remain below the national average in all three areas in 1986. Scores are generally closest to the national average in mathematics followed by language followed by reading (as is true of all LEP groups).

- Mathematics Computation scores range from .3 GE above the national average at grade 1 (.2 GE above at grade 2) to 2.5 GE below the national average at grade 11.
- Language Total scores range from .1 GE (at grade 3) to 3.5 GE (at grade 10) below the national average.
- Reading Total scores range from .8 GE (at grade 2) to 4.5 GE (grade 11) below the national average.

Gains from one year to the next of one grade equivalent or more allow LEP students to maintain their position or come closer to the national norm. Average gains for Spanish speakers are at or above one GE at 5 of 11 grades in reading (45%), 6 of 12 in language (50%), and 2 of 12 in mathematics (17%). Gains in all 3 areas were less than 1 GE at grades 2, 4, 5, 6, and 11. **Grades 2 and 4 were also weak the last two years.** Gains in all areas exceeded a year at grades 3, 7, and 8.

#### Vietnamese

These students already exceed the national average in:

- Mathematics Computation at grades 1-8 and 11, and
- Language at grades 1-5 (see Figure 2).

| Test Subject | 1986 Grade | Spanish LEP N | 85 | 86 | Gain | Vietnamese LEP N | 85 | 86 | Gain |
|---|---|---|---|---|---|---|---|---|---|
| Reading Total | 1 | No Reading Pretest available in Kindergarten | | | | | | | |
| | 2 | 127 | 1.3 | 2.0 | 0.6 | 13 | 1.8 | 2.5 | .7 |
| | 3 | 149 | 1.8 | 2.8 | 1.0 | 11 | 2.4 | 3.6 | 1.2 |
| | 4 | 143 | 2.7 | 3.5 | 0.8 | 8 | 3.3 | 4.2 | 0.9 |
| | 5 | 122 | 3.3 | 4.1 | 0.8 | 14 | 3.6 | 4.5 | 0.8 |
| | 6 | 134 | 3.8 | 4.7 | 0.9 | 12 | 4.4 | 5.1 | 0.7 |
| | 7 | 92 | 4.6 | 5.9 | 1.3 | 6 | 4.0 | 5.5 | 1.5 |
| | 8 | 77 | 5.3 | 6.5 | 1.2 | 4 | 4.6 | 6.5 | 1.9 |
| | 9 | 45 | 6.2 | 7.1 | 1.0 | 6 | 5.0 | 6.1 | 1.1 |
| | 10 | 19 | 6.3 | 7.0 | 0.7 | 9 | 6.5 | 5.6 | -0.9 |
| | 11 | 14 | 6.8 | 7.3 | 0.4 | 6 | 6.5 | 6.7 | 0.2 |
| | 12 | 10 | 8.4 | 10.4 | 1.9 | - | - | - | - |
| Language Total | 2 | 119 | 1.4 | 2.2 | 0.8 | 13 | 2.2 | 3.4 | 1.2 |
| | 3 | 142 | 2.0 | 3.7 | 1.6 | 11 | 3.3 | 4.4 | 1.1 |
| | 4 | 139 | 3.3 | 4.2 | 0.9 | 8 | 3.8 | 5.0 | 1.3 |
| | 5 | 117 | 3.9 | 4.8 | 0.9 | 13 | 4.9 | 6.2 | 1.4 |
| | 6 | 129 | 4.4 | 5.1 | 0.8 | 11 | 5.2 | 6.5 | 1.3 |
| | 7 | 90 | 5.2 | 6.4 | 1.2 | 6 | 5.1 | 6.7 | 1.6 |
| | 8 | 76 | 5.3 | 6.7 | 1.4 | 4 | 5.1 | 7.2 | 2.2 |
| | 9 | 45 | 6.6 | 7.5 | 1.0 | 6 | 5.7 | 7.6 | 1.9 |
| | 10 | 20 | 6.6 | 7.3 | 0.8 | 9 | 7.2 | 6.9 | -0.3 |
| | 11 | 14 | 7.7 | 8.5 | 0.8 | 6 | 7.3 | 10.2 | 2.9 |
| | 12 | 10 | 9.1 | 11.2 | 2.1 | - | - | - | - |
| Math Total | 2 | 195 | 2.0 | 3.0 | 0.9 | 14 | 2.5 | 3.5 | 1.0 |
| | 3 | 172 | 2.8 | 3.7 | 0.9 | 11 | 3.5 | 4.3 | 0.8 |
| | 4 | 155 | 3.7 | 4.3 | 0.6 | 8 | 4.8 | 5.5 | 0.7 |
| | 5 | 131 | 4.4 | 5.3 | 0.9 | 15 | 5.4 | 6.6 | 1.2 |
| | 6 | 135 | 5.2 | 6.1 | 0.9 | 13 | 6.1 | 7.2 | 1.1 |
| | 7 | 95 | 6.2 | 7.2 | 1.0 | 6 | 8.0 | 8.8 | 0.8 |
| | 8 | 75 | 7.1 | 7.9 | 0.8 | 4 | 7.2 | 8.8 | 1.6 |
| | 9 | 46 | 7.8 | 7.8 | -0.0 | 6 | 8.4 | 9.5 | 1.1 |
| | 10 | 19 | 7.9 | 9.0 | 1.1 | 9 | 7.7 | 9.3 | 1.7 |
| | 11 | 14 | 8.7 | 9.3 | 0.6 | 6 | 11.4 | 14.4 | 3.0 |
| | 12 | 10 | 10.6 | 11.1 | 0.5 | - | - | - | - |

Figure 2. SPRING, 1985 AND 1986 ITBS/TAP AVERAGES. All students tested both years in regular campuses. Mathematics Computation was used for grades 1-8; Mathematics Total (including concepts and computation) is reflected at grades 9-12. Numbers may not add because of rounding.

While Reading Total mean scores are still below the national average, mean GE scores are within three months of the national norm at grades 2 and 3. On the other hand, Vietnamese averages are up to 5.2, 3.9, and 1.5 GE years below the national average in reading, language, and mathematics respectively (at grade 10). Vietnamese students showed gains at or above 1 GE year at 4 of 10 grade levels in reading (40%), 10 of 11 in language (91%), and 4 of 11 in mathematics (36%).

Other LEP Students

LEP students represent 43 languages besides Spanish and Vietnamese. However, the number in any one group is small. Their performance generally is more similar to the Vietnamese than Spanish speakers. It exceeds the national average in:

- Mathematics Computation at grades 2-4, 6-8, and 10-12.
- Language Total at grades 1-4, and
- Reading Total at grade 2.

However, they too show scores well below the national norm at some grade levels (generally high school).

These students showed gains at or above the national average in 10 of 11 grades in reading (91%), 10 of 12 in language (83%), and 9 of 12 in mathematics (75%).

Thus, Vietnamese and "Other" LEP students generally score higher on English achievement tests than Spanish speakers. However, all three groups exceed the national average in at least one subject at some grades. All three groups still must make considerable progress at other grade levels to narrow the gap on the national average. Signs of progress are evident in many cases. Performance is best in mathematics (the least language-related) followed by language and reading.

## SPANISH DOMINANT/MONOLINGUAL

It is difficult to evaluate the academic achievement of Spanish-dominant/monolingual students (LEP A & B categories) because they often cannot comprehend enough English to take the ITBS. The achievement of these students was monitored using two measures:

1. The Spanish reading achievement of LEP A & B students in grades 2-6 on the Prueba de Lectura, and

2. The ITBS performance of students tested with the Prueba de Lectura for the first time in 1982, 1983, 1984, and 1985.

Prueba de Lectura. The Prueba de Lectura provides a measure of level of comprehension, speed of comprehension, and vocabulary in Spanish reading. It is administered each March to LEP A & B students by ORE testers. The maximum raw score is 110. The table below shows the performance in raw scores for 1985 and 1986 of those tested both years.

- Mean scores increased by grade level;
- All groups showed increased knowledge of Spanish reading;
- The most growth occurred for those who moved from second to third grade;
- The least growth occurred for those moving from fifth to sixth grade.

| | GRADE IN 1986 | | | |
|---|---|---|---|---|
| | 3 | 4 | 5 | 6 |
| 1985 | 49.3 | 59.7 | 67.1 | 76.5 |
| 1986 | 63.0 | 69.0 | 76.3 | 84.3 |
| Gain | 13.7 | 9.3 | 9.2 | 7.8 |
| # Tested | 53 | 31 | 25 | 23 |

Figure 4. PRUEBA DE LECTURA PERFORMANCE FOR SPANISH DOMINANT/MONOLINGUAL STUDENTS 1985-86. Reflects mean raw scores only for those tested both years.

These results roughly parallel those found last year, except that students now in grade 3 showed slightly larger gains than last year. The fact that gains decline somewhat across grades may reflect less time spent on Spanish at the upper elementary grades or less room for growth (many students show very high scores in grades 5 and 6). One caution to interpretation of these results is that students are not retested for dominance each year. Therefore, some students may be more proficient in English than their status implies.

ITBS Performance. The progress on the ITBS of four groups of 2nd-6th graders taking the PDL in spring, 1982 through 1985 was monitored. The percentage of students falling in two groups was of particular interest:

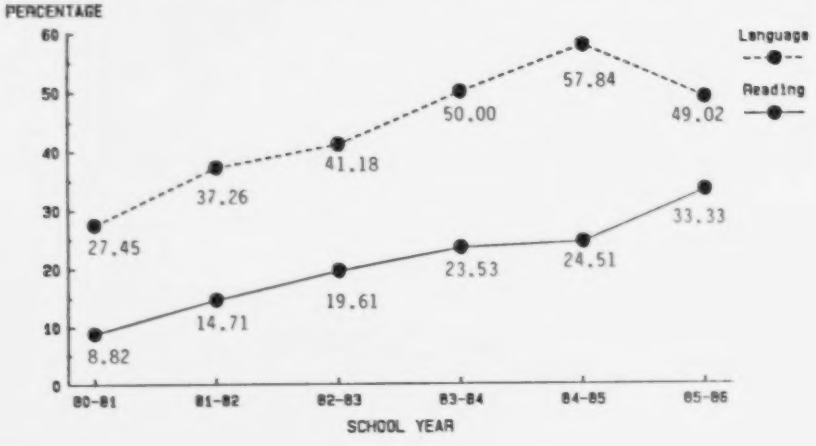
1. Students with no ITBS/TAP score or a score below the 7th percentile (chance level),

2. Students with scores above the 40th percentile.

A decrease in the percentage of students untested or scoring at a chance level and an increase in the percentage scoring at or above the 40th percentile was expected as English skills and knowledge increased.

With few exceptions, this was the pattern found. Overall, there is evidence of progress from year to year. The percentage of students in the 1980-81 group scoring above the 40th percentile illustrates this finding.

**1980-81 SPANISH MONOLINGUAL/DOMINANT STUDENTS**
**PERCENT SCORING AT OR ABOVE 40TH PERCENTILE**
**LANGUAGE AND READING, 1980-81 THROUGH 1985-86**




N = 102
Scores are taken from ITBS and TAP

## ELEMENTARY BILINGUAL AIDES

Regression analyses were run to compare the achievement patterns of LEP students dominant in another language (LEP A and B) or balanced in their knowledge of English and another language (LEP C) based on whether or not they were served by a bilingual aide. English-dominant students were not included because the group not served by aides had a higher percentage of these students than those served. The analyses controlled for pretest level.

The analyses revealed that on the average, those **not** served by a bilingual aide showed progress **about the same or significantly greater** than that evident for the group served (see Figure 5). The group not served by aides showed significantly better performance at grades 1 and 5 in reading and 1, 4, 5, and 6 in language. Thus, **these results do not support the effectiveness of bilingual aides for LEP students.**

Reading

| | Aides | | | | No Aides | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Grade | N | Pre | Post | Gain | N | Pre | Post | Gain | Sig. |
| 1 | 103 | .11 | 1.17 | 1.06 | 77 | .04 | 1.68 | 1.64 | * |
| 2 | 63 | 1.20 | 1.85 | .65 | 47 | 1.63 | 2.28 | .66 | NS |
| 3 | 68 | 1.62 | 2.74 | 1.12 | 60 | 1.99 | 3.13 | 1.14 | NS |
| 4 | 73 | 2.59 | 3.44 | .85 | 48 | 2.84 | 3.84 | 1.00 | NS |
| 5 | 45 | 3.14 | 3.83 | .69 | 56 | 3.48 | 4.38 | .90 | * |
| 6 | 57 | 3.54 | 4.50 | .96 | 59 | 3.77 | 4.86 | 1.09 | NS |

Language

| | Aides | | | | No Aides | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Grade | N | Pre | Post | Gain | N | Pre | Post | Gain | Sig. |
| 1 | 91 | .07 | 1.39 | 1.32 | 75 | .05 | 2.15 | 2.10 | * |
| 2 | 59 | 1.18 | 2.12 | .94 | 40 | 1.87 | 2.70 | .83 | NS |
| 3 | 64 | 1.80 | 3.64 | 1.84 | 56 | 2.32 | 4.13 | 1.81 | NS |
| 4 | 67 | 3.23 | 4.09 | .86 | 48 | 3.54 | 4.70 | 1.16 | ** |
| 5 | 42 | 3.66 | 4.55 | .89 | 53 | 4.15 | 5.39 | 1.24 | * |
| 6 | 54 | 4.09 | 4.91 | .82 | 56 | 4.30 | 5.58 | 1.28 | ** |

Figure 5. ACHIEVEMENT OF LEP STUDENTS SERVED AND NOT SERVED BY BILINGUAL AIDES. Represents LEP categories A, B, and C students' Reading Total and Language Total scores on the ITBS in spring, 1985 and spring, 1986.

* = significance at $p<.05$ favoring group not served by aides;
** = significance at $p<.01$ favoring group not served by aides;
NS = no significant difference between groups.

## MURCHISON JUNIOR HIGH

Most students dominant or monolingual in Spanish (LEP categories A & B) at the junior high level participate in the TBE program at Murchison. Some of these students were also tutored through the Title VII Program. The progress after one year of the last two groups of students involved is shown in Figure 6.

| Grade in 1985 | | N | 1984 Pretest | 1985 Posttest | Gain |
|---|---|---|---|---|---|
| 7 | Reading | 22 | 3.65 | 5.11 | 1.46 |
| | Language | 16 | 4.24 | 5.67 | 1.43 |
| | Math | 32 | 5.81 | 7.19 | 1.38 |
| 8 | Reading | 9 | 4.67 | 5.64 | .97 |
| | Language | 9 | 4.66 | 5.34 | .68 |
| | Math | 10 | 6.66 | 7.72 | 1.06 |
| **Grade in 1986** | | **N** | **1985 Pretest** | **1985 Posttest** | **Gain** |
| 7 | Reading | 10 | 3.74 | 5.40 | 1.66 |
| | Language | 10 | 3.78 | 5.60 | 1.82 |
| | Math | 10 | 6.30 | 7.95 | 1.65 |
| 8 | Reading | 42 | 4.76 | 5.98 | 1.22 |
| | Language | 42 | 4.67 | 6.01 | 1.34 |
| | Math | 42 | 6.98 | 7.76 | .78 |

Figure 6. COMPARISON OF MURCHISON GRADE EQUIVALENT GAINS OVER TWO YEARS. Reading Total, Language Total, and Mathematics Computation scores on the ITBS were utilized. Two groups are reflected--those at Murchison in 1984-85 and those there in 1985-86.

For those students able to be tested for two years in a row:

- **Both groups generally showed gains exceeding one GE year (the national average) in all three areas (9 of 12 comparisons).** Exceptions were grade 8 1984-85 reading and language and grade 8 1985-86 mathematics computation. Gains exceeding one GE help these students close the gap between their performance and the national average.

- Seventh and eighth graders in 1985-86 showed greater gains than those in the same grade in 1984-85 in 5 of 6 comparisons. Differences ranged from .2 to .66 of a GE year. The one exception was grade 8 mathematics, in which case the 1984-85 students gained 1.06 GE year compared to .78 of a year for the 1985-86 group.

- Most of those in grade 8 this year attended Murchison last year as 7th graders. These students continue to make strong growth this year, although it is not quite as strong as last year. The one weak area was mathematics computation, with a gain of .78 this year compared to 1.38 last year.

- **Both groups remained below the national average except in mathematics computation for the 1985-86 7th graders.** Mathematics Computation scores were the highest overall. Students were furthest below the national average in reading at grade 8 in 1984-85 (3.16 years).

Overall, the Murchison program appears quite successful with most Spanish-dominant students.

## TRAVIS HIGH SCHOOL

Spanish-dominant students could transfer to Travis for the first time in 1985-86 and take advantage of two new programs:

- Sheltered Bilingual (enhanced ESL),

- Title VII (services for teachers)

Only 14 students had ITBS or TAP scores from both 1985-86 and 1984-85 (about 56 students participated). This is because many were new to AISD this year and some who were not new could not understand English well enough to be tested last year and/or this year.

For those students tested in 1985-86 and 1984-85:

- About half demonstrated gains of 1 GE year or more in each test area.

- Student achievement is still below the national average in all grade and subject areas.

## TEAMS

The Texas Educational Assessment of Minimum Skills (TEAMS) is the statewide Minimum Competency test (given in English only in 1985-86). The figures to the right show the percentage of all AISD, LEP, and statewide LEP students who mastered each test at grades 3, 5, 7, and 9. More information should be available later this summer on grade 11 and performance at all grades for large urban districts.

**Particular emphasis must be placed on LEP student mastery of the TEAMS.**

- AISD LEP students show much lower mastery percentages (13 to 49%) than for AISD students overall (59 to 82%).

**AISD's mathematics program continues to need improvement for all students** (in content, methods, and/or time spent). The possibility that mathematics is emphasized even less for LEP students than others (because of their language difficulties) should be explored.

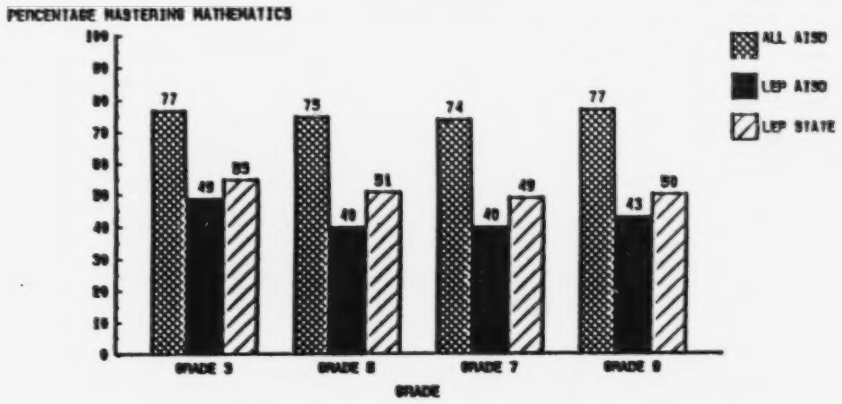
- Differences in statewide and AISD mastery percentages are greatest in mathematics (both for LEP students and the population overall).

**AISD's language program for LEP students appears relatively strong.**

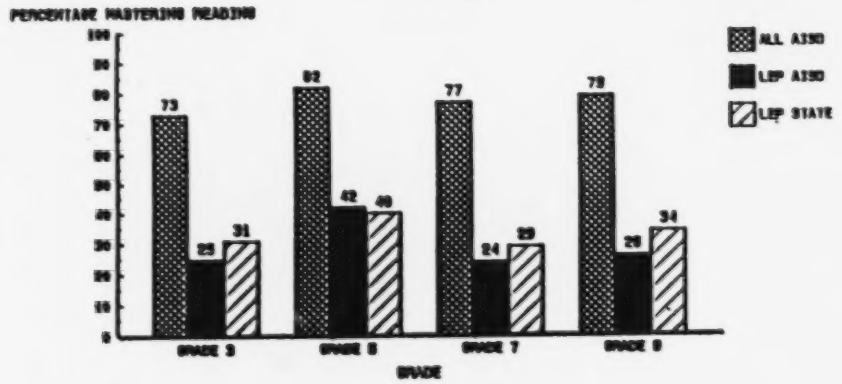
- AISD LEP students come closer to statewide mastery percentages in language than in reading or mathematics.

# LEP MASTERY OF TEAMS
## Statewide versus AISD Mastery Percentages

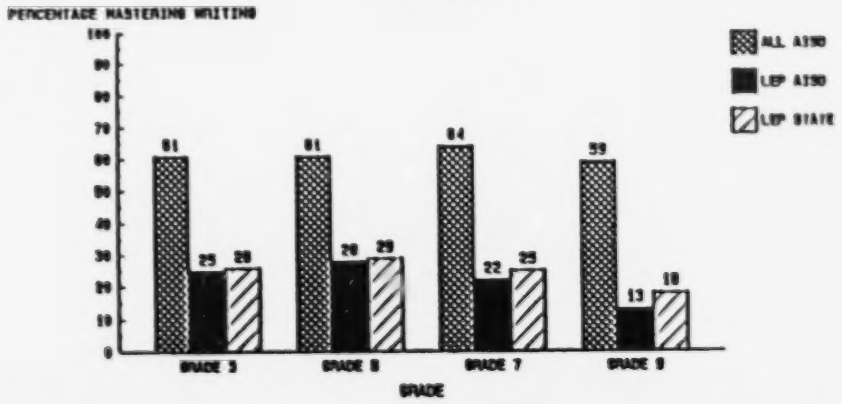
### Mathematics




### Reading




### Writing




Students tested Feb., 1990

## OVERALL ACHIEVEMENT TRENDS

The fact that all LEP students cannot be tested in English makes it difficult to measure English achievement as accurately as would be desirable. **However, it appears that AISD's bilingual/ESL** programs **generally appear to be helping LEP students' English proficiency and achievement.**

- While Spanish-speaking LEP students remain below the national average, the gap is slowly closing.
- Vietnamese students achieve above the national average at many grade levels in mathematics and language, and are closing the gap in reading.

Achievement results also suggest three areas of particular concern:

- Bilingual aides do not appear to be cost effective;
- Instructional remedies must be sought at grades 2 and 4 to prevent continued gains of less than 1 GE per year for Spanish LEP students;
- More emphasis or different approaches to TEAMS preparation for LEP students at grades 3, 5, 7, and 9 seem advisable--AISD LEP mastery is consistently below that for LEP students statewide.

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